

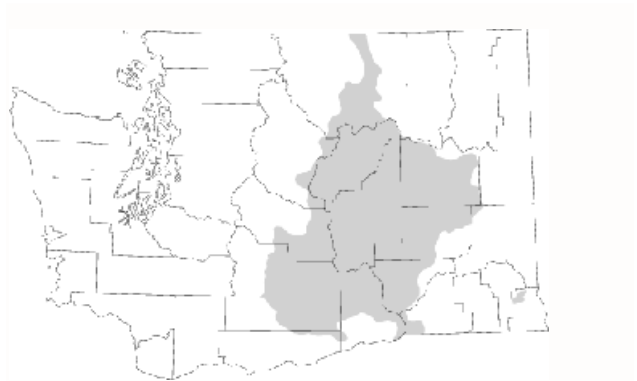
Sage Thrasher
Oreoscoptes montanus

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GENERAL RANGE AND WASHINGTON DISTRIBUTION

Sage thrashers breed from British Columbia to eastern Montana, south to northern Arizona and west to California. They winter from central California to central Texas, south to southern Baja California into northern Mexico (American Ornithologists' Union 1983).

In Washington, they are found in the Columbia Basin shrub-steppe region. Sage thrashers are documented in Adams, Asotin, Benton, Douglas, Franklin, Grant, Kittitas, Lincoln, Okanogan, Walla Walla and Yakima counties (Smith et al. 1997).



Breeding range of the sage thrasher, *Oreoscoptes montanus*, in Washington. Map derived from Smith et al. 1997.

RATIONALE

The sage thrasher is a State Candidate species that is highly dependent on healthy shrub-steppe communities comprised of tall, dense sagebrush (*Artemisia* spp.) (Rich 1980, Reynolds 1981, Reynolds and Rich 1978, Petersen and Best 1991). Shrub-steppe in Washington has become severely fragmented and reduced in extent over the last century (Dobler et al. 1996). Furthermore, the Interior Columbia River Basin Ecosystem Management Project listed the sage thrasher as a species of high management concern for the region (Saab and Rich 1997).

HABITAT REQUIREMENTS

Sage thrashers are closely associated with sagebrush and are considered obligates of sagebrush communities (Braun et al. 1976). In Idaho, sage thrashers used sites that were characterized as having high sagebrush cover within large blocks of shrub-steppe (Knick and Rotenberry 1995). Shrub-steppe describes a plant community consisting of one or more layers of grasses with a discontinuous overstory of shrub cover (Daubenmire 1988). Sage thrashers nest in stands of big sagebrush, placing their nests in or beneath shrubs that are generally 55 to 90 cm (22-36 in) tall (Reynolds and Rich 1978, Rich 1980, Reynolds 1981, Petersen and Best 1991). In Washington, nest shrubs averaged 102 cm tall ($n = 122$) (Washington Department of Fish and Wildlife, unpublished data). Thrasher nests are bulky and usually located in large bushes with substantially thick branches that provide adequate support (Reyser 1985, Rich 1985). Reynolds (1981) found that nests built either on the ground or within shrubs had approximately the same depth of foliage over their nests (57.5 cm [23 in]). Petersen and Best (1991) reported that sage thrashers favored shrubs with high foliage density. They also found that thrashers preferred nesting in shrubs having branches or foliage within 30 cm (11.7 in) of the ground. Sage thrashers require a relatively open understory for foraging (Reynolds et al. 1999); however, the amount of bare ground around a typical nest site is usually less than that in the surrounding area (Petersen and Best 1991).

Sage thrashers in Washington occurred in greater abundance in shrub-steppe communities that ranged from fair to good condition (characterized by fewer invasive exotic plants) than at poor condition sites (Vander Haegen et al. 2000). Additionally, sage thrashers were more abundant in shrub-steppe communities with loamy and shallow soils rather than sandy soils.

Mean territory size for sage thrashers ranged from 0.39 ha (1 ac) for birds in Washington (Stephens 1985) to $0.96 \text{ ha} \pm 0.12 \text{ ha}$ ($2.37 \text{ ac} \pm 0.3 \text{ ac}$) in Idaho (Reynolds and Rich 1978). Sage thrashers will nest in fragments of shrub-steppe set within agricultural areas (Vander Haegen et al. 2002). However, birds using these fragmented sites may experience greater rates of nest predation than their counterparts nesting in large blocks of shrub-steppe.

Sage thrashers forage primarily on the ground and mainly consume grasshoppers, ants, beetles and other insect larvae during the spring (Ryser 1985, Stephens 1985, Petersen and Best 1991). In summer, small fruits are added to their diet (Ryser 1985).

LIMITING FACTORS

Availability of shrub-steppe communities containing tall sagebrush for nesting likely limit the distribution of sage thrashers in Washington (Reynolds et al. 1999). Additionally, degradation of sagebrush stands by invasive plants such as cheatgrass (*Bromus tectorum*) also render sites less suitable to sage thrashers. Fragmentation of shrub-steppe by agriculture apparently does not exclude sage thrashers but will result in lost breeding habitat (Reynolds et al. 1999).

MANAGEMENT RECOMMENDATIONS

In order to maintain sage thrasher populations, shrub-steppe communities should be left in reasonably undisturbed condition and fragmentation should be minimized (Reynolds et al. 1999, Wisdom et al. 2000). Management activities that increase cheatgrass invasion or increase risk of wildfire also must be avoided.

Optimum habitat for sage thrashers in Washington consists of blocks of shrub-steppe > 16 ha (40 ac) with sagebrush cover ranging from 5-20% and shrubs averaging >80 cm (32 in) tall (Altman and Holmes 2000). An herbaceous cover of native species should average 5-20%, with 10% of the ground bare (including areas of cryptogamic crust) to allow movement on the ground. Exotic annual grasses should cover <10% of the ground. Although much of Washington's shrub-steppe is fragmented by agriculture, habitat restoration on formerly tilled fields could expand the range of shrub-steppe obligate birds in fragmented landscapes (Vander Haegen et al. 2000).

Removal of sagebrush should be considered only in rare instances when reducing shrub cover is necessary to meet ecological goals of habitat restoration (Wisdom et al. 2000). Sagebrush cover should only be reduced on a site after careful consideration of how the removal methods may affect sagebrush regeneration and the spread of exotic vegetation. Burning may lead to serious negative impacts to local sage thrasher populations because the damage is immediate and regeneration to pre-burn condition may take up to 30 years (Harniss and Murray 1973). Fire is not a suitable tool to reduce sagebrush cover in low rainfall zones (e.g., Benton, Franklin and Grant Counties) because exotic plants overwhelm the natives plants and sagebrush is slow to recover (Knick and Rotenberry 1995, Reynolds et al. 1999, Wisdom et al. 2000). If chemical use is planned for areas where this species occurs, refer to Appendix A for a list of contacts to consult when using and assessing pesticides, herbicides and their alternatives.

Although data are limited on this subject, livestock grazing at low to moderate levels has not been shown to be detrimental to sage thrasher habitat (Saab et al. 1995). Because sage thrashers frequently nest and forage at ground level, Altman and Holmes (2000) state that grazing levels should be kept at low intensities. They also suggest allowing >50% of the year's growth of perennial bunchgrass to persist through the following breeding season.

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KEY POINTS

Habitat Requirements

- Closely associated with sagebrush and considered obligates of sagebrush communities. Require extensive stands of shrub-steppe.
- Nest in stands of big sagebrush, placing their nests in or beneath shrubs. Nests are bulky and usually located in large bushes having substantially thick branches that provide adequate support. Favor shrubs with high foliage density that have branches or foliage within 30 cm (11.7 in) of the ground.
- Abundant in shrub-steppe communities with loamy and shallow soils rather than communities with sandy soils.
- Feed primarily on insect larvae.

Management Recommendation

- Retain sagebrush communities and avoid fragmentation of existing sagebrush stands.
- Avoid activities that may increase invasion of cheatgrass and other exotic vegetation.

- Grazing of livestock should be kept at low to moderate levels, with >50% of the year's growth of perennial bunchgrass persisting through the following breeding season.
- Control wildfires in sagebrush habitat, especially in low rainfall zones.
- Removal of sagebrush should be considered only in rare instances when reducing shrub cover is necessary to meet ecological goals of habitat restoration.
- Retain blocks of shrub-steppe > 16 ha (40 ac) with sagebrush cover ranging from 5-20% and shrubs averaging >80 cm (32 in) tall. An herbaceous cover of native species should average 5-20%, with \$10% of the ground bare (including areas of cryptogamic crust). Exotic annual grasses should cover <10% of the ground.
- Refer to Appendix A for a list of contacts to consult when using and assessing pesticides, herbicides and their alternatives.